

Appl. No.: 09/990,722

Amdt. Dated September 21, 2005

Response to Office Action of April 25, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A system enabling a web services network, comprising:

 a parent node operably connected to a computer network,

 the parent node ~~comprising~~ maintaining a first routing table stored in a persistent data store, the first routing table including routing entries allowing for the routing of service action requests ~~and responses~~ across the computer network; and

 at least one routing node ~~comprising~~ maintaining a local routing table including routing entries allowing for the routing of service action requests ~~and responses~~ across the computer network,

the routing entries each comprising an action identifier and a corresponding network resource locator;

 the routing node operably connected to the computer network to route service action requests including action identifiers to service providing endpoints associated with the network resource locators corresponding to the action identifiers ~~and service action responses across the computer network,~~

 wherein the parent node is operative to add a routing entry to the local routing table of the routing node in response to a routing entity request;

 wherein the routing node, in response to a service action request requiring a routing entry not contained in the local routing table, transmits a routing entity request to the parent node.

2. (original) The system of claim 1 wherein the parent node is operative to maintain the local routing table(s) on the routing node(s) associated therewith.

3. (original) The system of claim 1 wherein the parent node is operative to receive and process updates to routing entries in the first routing table; and wherein, in response to the updates, the parent node is operative to update the local routing table(s) on the routing node(s) associated

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therewith.

4. (original) The system of claim 1 wherein the parent node is a root node, and the first routing table is a global routing table.
5. (original) The system of claim 1 wherein the parent node is operative to route service action requests and service action responses across the computer network.
6. (original) The system of claim 2 wherein the parent node maintains a routing matrix in the persistent data store, wherein the routing matrix facilitates maintenance of the local routing table(s) of the routing node(s) associated with the parent node.
7. (original) The system of claim 6 wherein the routing matrix facilitates identification of out-of-date routing entries in the local routing table(s) of the routing node(s) associated with the parent node.
8. (original) The system of claim 7 wherein the routing matrix contains parent node update stamps for corresponding routing entries in the first routing table; and wherein, for each routing node associated with the parent node, the routing matrix contains a routing node update stamp for each routing entry in the local routing table.
9. (original) The system of claim 7 wherein the parent node is operative to update a routing entry in the local routing table of a routing node based on a comparison of the corresponding parent node update stamp and routing node update stamp.
10. (original) The system of claim 1 wherein the local routing table is a subset of the first routing table.
11. (original) The system of claim 1 wherein the routing node resides on a network routing device.

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12. (original) The system of claim 1 further comprising a console application providing a user interface facilitating configuration of the parent node and the routing node.
13. (original) The system of claim 12 wherein the console application transmits service action requests operative to change the configuration of the parent node and/or the routing node.
14. (original) The system of claim 1 wherein the parent node includes platform services functionality allowing for configuration of the parent node and the routing node; and wherein the platform services functionality is presented as a web service accessible via a service action request.
15. (currently amended) A system enabling a web services network, comprising:
a root network services engine operably connected to a computer network,
the root network services engine maintaining a persistent data store storing a global routing table including routing entries allowing for the routing of service action requests and responses over the computer network;
a network services engine operably connected to the computer network,
the network services engine comprising maintaining a persistent data store storing a first local routing table including routing entries allowing for the routing of service actions requests and responses over the computer network;
at least one network services switch operably connected to the computer network,
the network services switch comprising maintaining a second local routing table including routing entries allowing for the routing of service actions requests and responses over the computer network;
the routing entries each comprising an action identifier and a corresponding network resource locator;
wherein the network services switch routing node is operative to route service action requests including action identifiers to service providing endpoints associated with the network resource locators corresponding to the action identifiers and service action responses to

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~~appropriate nodes connected to the computer network,~~

wherein the root network services engine is operative to add a routing entry to the first and/or second local routing table in response to a routing entity request;

wherein the network services engine is operative to add a routing entry to the second local routing table in response to a routing entity request;

wherein the network services engine passes routing entity requests associated with a routing entry not contained in the first local routing table to the root network services engine; and,

wherein the network services switch is operative to transmit a routing entity request to the network services engine in response to a service action request requiring a routing entry not contained in the second local routing table.

16. (original) The system of claim 15 wherein the root network services engine is operative to maintain the local routing tables on the child network services engines and switches operably directly associated therewith.

17. (original) The system of claim 15 wherein the network services engine is operative to maintain the local routing tables of the child network services engines and switches operably directly associated therewith.

18. (original) The system of claim 15 wherein the network services engine is operative to route service action requests and service action responses across the computer network.

19. (original) The system of claim 15 wherein the network services engine is operative to receive and process updates to routing entries in the first local routing table; and wherein, in response to the updates, the network services engine is operative to update the global routing table on the root network services engine and the second local routing table(s) on the routing node(s) associated therewith.

20. (original) The system of claim 16 wherein the root network services maintains a routing matrix

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in the persistent data store, wherein the routing matrix facilitates maintenance of the local routing table of child network services engine(s) and the network services switches directly associated therewith.

21. (original) The system of claim 20 wherein the routing matrix facilitates identification of out-of-date routing entries in the local routing table(s) of the child network services engine.

22. (original) The system of claim 21 wherein the routing matrix contains parent node update stamps for corresponding routing entries in the global routing table; and wherein, for each child routing node directly associated with the root network services engine, the routing matrix contains a routing node update stamp for each routing entry in the local routing table.

23. (original) The system of claim 21 wherein the network services engine is operative to update a routing entry in the local routing table of a child routing node based on a comparison of the corresponding parent node update stamp and routing node update stamp.

24.-27. (canceled)

28. (currently amended) A method for providing a web services network on a computer network environment, the computer network environment including a plurality of routing nodes operative to route data between nodes connected to the computer network, the method comprising the steps of

installing a network services engine on the computer network environment, wherein the network services engine comprises a first local routing table including routing entries allowing for the routing of service actions requests over the computer network;

installing at least one network services switch on computer network environment, wherein the network services switch comprises a second local routing table including routing entries allowing for the routing of service actions requests over the computer network; the routing entries each comprising an action identifier and a corresponding network resource locator;

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wherein the network services engine is operable to support and maintain the network services switch(es); and,

wherein the network services switch is operable to route service action requests including action identifiers to service providing endpoints associated with the network resource locators corresponding to the action identifiers; and ~~service action responses to appropriate nodes in the computer network environment~~

wherein the network services switch is operative to transmit a routing entity request to the network services engine in response to a service action request requiring a routing entry not contained in the second local routing table;

wherein the network services engine is operative to add a routing entry to the second local routing table in response to a routing entity request.

29. (original) The method of claim 28 wherein the network services switch(es) are installed on existing routing nodes in the computer network environment.